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ABSTRACT

This review analyzes the trend in educational decision making to replace hierarchical authority structures with more rational models for decision making drawn from management science. Emphasis is also placed on alternatives to a hierarchical decision-making model, including governing models, union models, and influence models. A 54-item bibliography of related literature is included. (RA)

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Models for Rational Decision Making

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MODELS FOR RATIONAL DECISION MAKING

**Analysis of Literature
and
Selected Bibliography**

by

John S. Hall

**U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

In mid-June 1970 the Clearinghouse received an urgent request from Central ERIC in the U.S. Office of Education to prepare selected bibliographies and brief analyses of literature on eleven critical topics related to school organization and administration.

The bibliographies and analyses were required by USOE's National Center for Educational Research and Development (formerly the Bureau of Research) in planning its new program of directed research and development. School organization and administration is one of four areas of education chosen by the center to receive concentrated research and development assistance. The others are reading, early childhood, and vocational education.

Through a joint effort the Clearinghouse staff completed the bibliographies and analyses for shipment to USOE by July 2, the deadline date.

The analysis and bibliography combined here focus on (1) current or developing decision-making models and strategies in education and evidence of effectiveness, and (2) existing or possible alternative models of authority systems and decision processes in schools.

The literature cited in the bibliography and analyzed in the paper was drawn from a search of the two ERIC index catalogs, Research in Education and Current Index to Journals in Education, and from the following non-ERIC sources: Books in Print, Cumulative Book Index, Education Index, Public Affairs Information Service, Sociological Abstracts, Social Sciences and Humanities Index, and Book Review Digest. Although the urgency of the request precluded a full and comprehensive search and analysis of the literature, the reviews and bibliographies are intended to assess accurately some of the current developments and emerging trends on the topic.

Many of the documents cited in the bibliography can be ordered from the ERIC Document Reproduction Service. Instructions for ordering these documents are given at the end of the bibliography.

Philip K. Piele
Director

Analysis of Literature on
MODELS FOR RATIONAL DECISION MAKING

Theoretical discussions of models for decision making in education have generally attempted to categorize models as either (1) rational or synoptic or (2) behavioral (Lundin and Welty 1970 and Miklos 1969; both of these works contain reviews of the literature and bibliographies related to models for decision making in education). The rational models are described as formally rigorous and as providing the basis for studies that focus on the organizational structure of schools and on bureaucratic characteristics that relate to the hierarchical exercise of authority (Miklos 1969). The most frequent criticism of rational models is that they are not sufficiently isomorphic.

On the other hand, the literature has produced behavioral models that forgo extreme formal rigor to acquire greater realism. These models are described as providing the basis for anecdotal and case study varieties of the literature (Lundin and Welty 1970).

The emphasis on bureaucratic characteristics and on the hierarchical exercise of authority inherent in the rational approach has, until very recently, provided an excellent analytical vehicle for investigation of decision making in education, since decision making has largely been the prerogative of formally recognized educational managers and policy makers (Anderson 1968). Most school organizations of the immediate past are well described by the "hierarchical model" (Williams 1970). Under this model, lines of authority, rules and regulations, and relationships between teachers, administrators, and board

members are clearly delineated. Decisions regarding the long-range formulation of policy clearly rest with the board of education while immediate operational decisions are made by staff administrators.

Highly compatible with the hierarchical model are recent developments in the field of management science that should greatly expand the basis for rational decision making (Cook 1968). Essentially, the newer techniques developed by management science (e.g., PPBS, MIS) are designed to improve the decision maker's information base. According to the rational model, greater access to information should improve the administrator's decision-making capabilities. Among the mushrooming volume of literature concerning the techniques of management science, the following explicitly relate these techniques to decision-making models: Alkin (1969), Foley (1968), Hartley (1968), and Pfeiffer (1968). Development of management systems techniques has for the most part occurred in organizations whose management has been clearly visible (Carter 1969). Given the analogous hierarchical model of school organization, such techniques should lead to greater efficiency and improved decision-making capabilities in the schools.

The literature does, however, contain some forecasts of fundamental changes in the decision-making structure and process. The remainder of this review will be concerned with such forecasts, because, if valid, they would require a reassessment of the applicability of the rational model for educational decision making (Lundin and Welty 1970).

Williams (1970) contends that in many areas, the hierarchical model has been modified to increase the professionals' (teachers') participation in the decision-making process without altering the structure of that process. Whether or not the modified hierarchical model is viewed as a form of co-option in light of recent militant demands for participation by teacher organizations, the model

appears to have received at least the tacit support of recent research, which has found that superior decisions are often produced by group interaction as opposed to individual action (Bridges 1967 and Schmuck and Runkel 1968). For a review of research on educational decision making by groups and individuals that contains some contradictory findings, see Stollar and others (1969).

This model and accompanying research provide the rationale for recent training projects that have sought to improve school decision making through "human relations" techniques. Examples of such projects, along with some evaluations of their effectiveness, may be found in Croft (1969), Schmuck (1969), Schmuck and others (1969), and Schmuck and Runkel (1968). The unifying theme of such literature--stressing improved communication skills, clarification of roles, open interaction, etc.--is improvement of the decision-making process within the traditional (legitimized) decision-making structure.

But significant room for debate is suggested by other literature that regards recent demands for participation by teachers, students, and minority groups as demands for basic change in the decision-making structure. Alternative models requiring such a change for assimilating teachers into the decision-making process have been suggested by Blumberg (1969), Garbarino (1968), Green (1969), and Williams (1970).

One suggested alternative, the "academic model," refers to the governing system that has been used in many colleges and universities (Boyan 1966, Thompson 1965, and Williams 1970). According to this model, teachers would formally participate in decision making affecting the academic program, their area of expertise.

Another alternative, the "union model" (Garbarino 1968 and Williams 1970) requires formalized negotiation procedures between teachers and school management. This model, of course, represents a basic departure

from hierarchical patterns of educational administration, and is currently being implemented in some areas with the teacher's demand for greater decision-making prerogatives appearing as a basic item for negotiation (the classic treatment of negotiation in education is contained in Lieberman and Moskow 1966).

A unique alternative structure for decision making has been suggested by Musgrove and Taylor (1969). This model allows parents to have a greater voice in determining the ends of education, and gives teachers complete control over selection of educational means. Under this model, each school district would develop several kinds of schools, each having clearly stated objectives that reflect a particular educational philosophy. Parents would then be free to send their children to any school preferred.

The growing body of literature surrounding the demands of minority groups for decentralization and community control of urban schools points to another area of potential basic change in school decision-making structure. For a comprehensive and up-to-date bibliography of this literature, see The Center Forum (May 15, 1969). An important segment of this literature describes the patterns of power and influence, and the effect of these interactions on decision making in the New York City decentralization experiment (Gittell 1967a, Gittell 1967b, and Mayer 1969). For a thorough treatment of the theoretical implications of the community control model, see chapter 1 of Gittell and Hevesi (1969).

Little empirical research has been done on the effects of community control on decision making for the obvious reason that total decentralization of an urban school district has yet to take place. However, some recent studies indicate that increased community participation has been a factor in the introduction of innovative programs and techniques into "relatively stagnant educational systems" (Gittell and Hollander 1968), and that parent involvement in the schools during

decentralization experiments has had an enhancing effect on children's development and academic achievement (Lopate and others 1969).

Although the literature offers a number of alternative models for reallocating decision making in the schools, no single definitive model is available for incorporating each of these prescriptions into a viable decision-making structure for the future. An important segment of recent research provides a potential basis for such a model by viewing the educational system as a dynamic social system and by attempting to assess the power and influence relationships between formal and informal actors in the educational decision-making process. For a collection of abstracts of related documents, see ERIC Clearinghouse on Educational Administration (1969). Recent examples of such research may be found in Gittell and Hevesi (1969), Patterson (1968), and Wiley (1967).

However, this research has so far avoided an important question that must be answered prior to the construction of a more complex and realistic model of educational decision making. Namely, what would be the effect of proposed redistributions of decision-making authority on the end products of the educational system? Additional research is needed on the effects of shifts from the hierarchical model to other models reviewed. If such research shows improvement in educational programs, teacher performance, and pupil achievement, then the models warrant further support and refinement. However, if such research indicates opposite results, then alternative models must be found.

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